

# Amphibia, Anura, Hylidae, *Bokermannohyla lucianae* (Napoli and Pimenta, 2003): Distribution extension and geographic distribution map

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**ABSTRACT:** The geographic distribution of *Bokermannohyla lucianae*, known only from its type locality in the municipality of Una, is extended 60 km south and 60 km south-west with two new localities in southern Bahia. The species seems to be restricted to remnants of primary and secondary Atlantic Rainforest patches in a small area of southern Bahia.

*Bokermannohyla lucianae* (Napoli and Pimenta, 2003) is a medium sized tree frog (SVL in males 47.6-49.2 mm) placed in the "*Bokermannohyla circumdata*" group. In the original description *B. lucianae* is characterized by dark brown coloration on its dorsal side in preservative with transverse dark brown stripes barely evident or absent, and by the absence of transverse brown bars on the anterior and posterior surfaces of thighs and flanks. The species is currently known from only two contiguous protected forest patches in the municipality of Una (15°10' S, 39°04' W, 30 m above sea level), in the southern region of the state of Bahia, Brazil.

Herein, we report the discovery of two new populations of *B. lucianae* in southern Bahia. The first is at Fazenda Santa Clara (15°41' S, 38°57' W, 5 m above sea level), municipality of Canavieiras, Bahia. Three adult males were found calling near streams and rivulets inside secondary forest patches on 15 and 17 December 2005. One was perched on a shrub 1.2 m above the ground (Figure 1) and the other two on tree branches 1.3-2.0 m high. All three frogs were collected and the specimens deposited in the Museu Nacional, Universidade Federal do Rio de Janeiro (MNRJ 40482-40484).

The second population was found at the Private Reserve of Natural Heritage (RPPN) Serra Bonita (15°23'37.5" S, 39°33'58.1" W, 816 m above sea level), municipality of Camacan, Bahia. A male *B. lucianae* (MZUESC 8295) was collected at 21:30 h on 27 March 2010 when calling from a bromeliad 5.0 meters above the ground, next to an intermittent stream. Four other individuals of *B. lucianae* were heard at the same locality, all of them calling from bromeliads between 5.0 and 10.0 m height. A second expedition to the same stream resulted in the collection of two other specimens (MZUESC 8296-8297) on 8 May 2010 at 21:00 h. Both were located in a shrub between 50 and 70 cm above the ground. A survey of the amphibians of the RPPN has been underway since February 2009, consisting of visual and acoustic sampling at 36 sites. So far *B.*



**FIGURE 1.** Adult live male of *Bokermannohyla lucianae* from Fazenda Santa Clara, municipality of Canavieiras, state of Bahia, Brazil.

*lucianae* has been found only among the surroundings of this single stream. Both specimens were deposited in the Museu de Zoologia da Universidade Estadual de Santa Cruz. The collecting permit was issued by ICMBIO (Licença permanente 13708-1).

These new records of *B. lucianae* from the municipalities of Canavieiras and Camacan represent, respectively, an increase of its known geographical distribution of approximately 60 km south-west and 60 km south from the municipality of Una, representing the first known localities outside the type locality (Figure 2).

All areas where the species has been detected are characterized by the presence of primary or secondary Atlantic Rainforest fragments with a high abundance of lianas and epiphytes (Napoli and Pimenta 2003). All records were made at localities considered as priorities for conservation of the Atlantic Rainforest biodiversity, having been categorized as Extremely High or Very High conservation priorities (MMA 2000). The specimens from RPPN Serra Bonita were collected at 816 m above sea level,

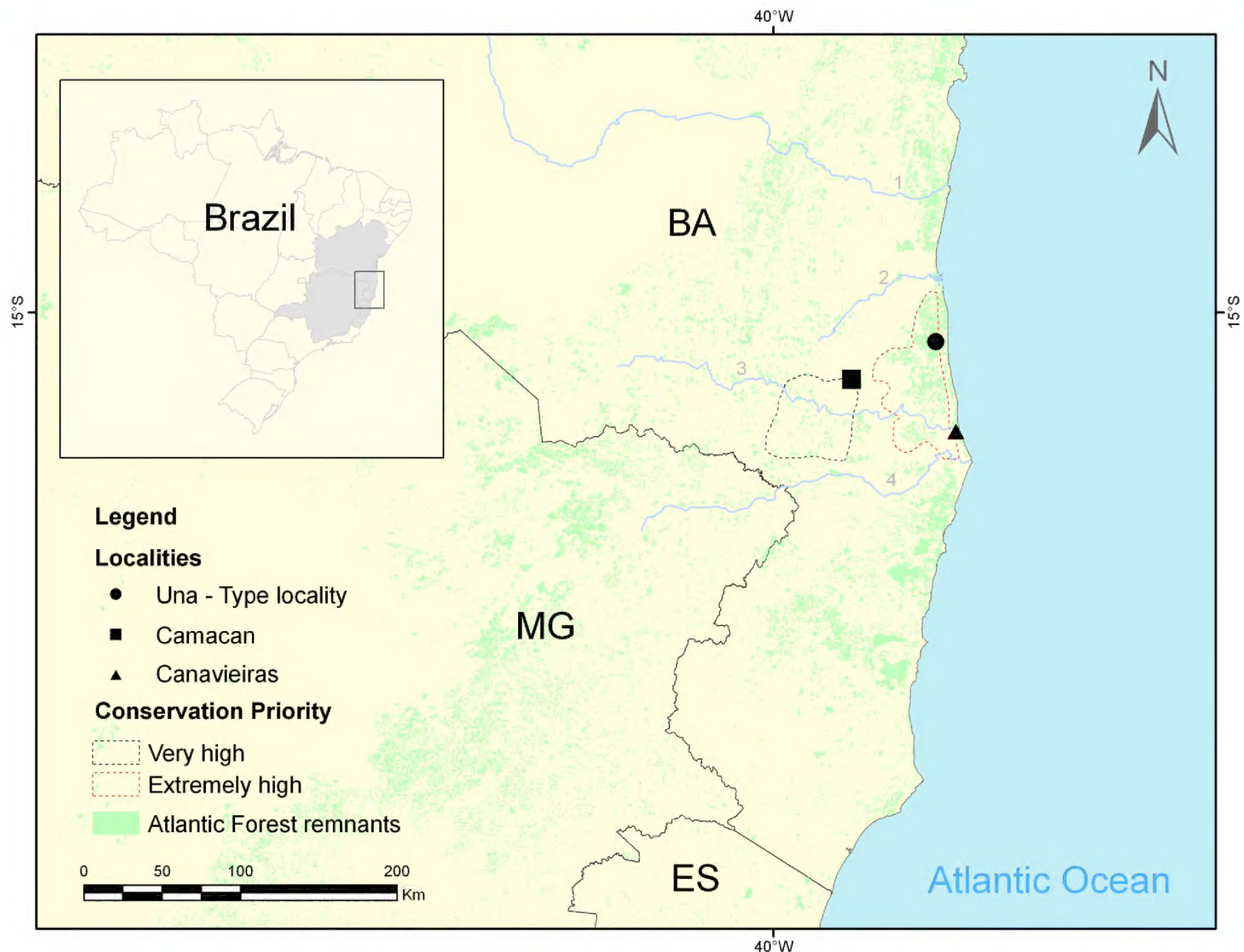


being one of the highest areas of the whole region and thus a substantial increase in the species altitudinal range from 30 m (type locality) up to 813 m (RPPN Serra Bonita).

Geographic distribution of *B. lucianae* seems to be restricted to an area between the rivers Jequitinhonha and Cachoeira. Northwards of the river Cachoeira, inhabiting coastal areas, we find *B. capra* Napoli and Pimenta 2009, which can be readily distinguished from *B. lucianae* by its bars on the posterior surfaces of flanks (immaculate in *B. lucianae*) and its different advertisement call (Napoli and Pimenta 2009).

The main economic activity of the region is cacao production, but with the arrival of witches broom disease,

a plague that ravaged the plantations in the 1980's, this activity started to decay and favored the expansion of livestock and monocultures such as coffee and eucalyptus. The fast progress of these activities and their negative impacts on the Atlantic Rainforest remnants demand effective actions to counter deforestation of the few forest remnants remaining. Furthermore, the implementation of new conservation areas is needed as well as support to those that have already been created. Species that are restricted to well preserved forest areas have fewer spots that fit their ecological needs every day, resulting in their distribution becoming more and more restricted to the few small fragmented and well conserved patches remaining within the region.



**FIGURE 2.** Geographic distribution of *Bokermannohyla lucianae* in Brazil. The major rivers of southern Bahia are numbered as follows: 1, Contas river; 2, Cachoeira river; 3, Pardo river; 4, Jequitinhonha river. BA, state of Bahia; MG, state of Minas Gerais; ES, state of Espírito Santo. Conservation priority: Extremely High (dashed red) and Very High (dashed black) (MMA 2000).

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